

Low-Level Radioactive Waste Disposition Activities Update

Transportation External Coordination Working Group

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Office of Disposal Operations

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Discussion Topics

- DOE Low-Level/Mixed Low-Level Waste Corporate Board (LLW Corporate Board)
- Greater-than-class C low-level radioactive waste (GTCC LLW) Disposition
- DOE radioactive waste and materials disposition data
 - Waste Information Management System (WIMS)

DOE LLW Corporate Board

- Uses a commercial business model to more effectively manage DOE LLW and MLLW activities
 - Based on Transuranic Waste Corporate Board
 - Promotes efficient and cost-effective treatment and disposal alternatives and use of DOE regional disposal facilities
 - Identifies and addresses complex-wide issues, coordinate operations
- Met and adopted bylaws in January 2008

LLW Corporate Board Bylaws

- Chaired by EM DAS for Regulatory Compliance
- Made up of two-tiers
 - Executive board: Federal representatives from large EM sites, other DOE programs, and some small sites
 - Full board: Site contractor representatives selected by Executive Board members
- Meet face-to-face twice per year with executive, full board, and break out sessions
- Discuss issues and initiatives and make consensus recommendations to the chair



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LLW Corporate Board Initiatives

- Work initiatives through standing and ad hoc committees
- Support ongoing planning activities of the Office of Disposal Operations, e.g., National Disposition Strategy, forecast data, and scheduling of complex-wide facilities.
- Identify new technology or packaging needs
- Look for efficiencies and ways to optimize or standardize approaches



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Some Issues Identified at First LLW Corporate Board Meeting

- Impacts of reduced budgets on volumes and timeliness of disposal
- Disposal of classified waste, large objects, DU, etc.
- New on-site disposal cells
- Future disposal of MLLW
- Future treatment of waste currently sent to the TSCA Incinerator
- Limited cadre of Q-cleared drivers
- New packaging needs
- Reducing transport costs through use of government tenders



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DOE is responsible for GTCC LLW Disposition

- Section 3(b)(1)(D) of the Low Level Radioactive Waste Policy Amendments act
 - Assigns the Federal government (DOE) responsibility for the disposal of GTCC LLW
 - States have responsibility for other LLW disposal
- Section 631 of the Energy Policy Act of 2005
 - Required a report to Congress: delivered 8/1/2006
 - Before DOE makes a final decision on the disposal alternative(s) to be implemented:
 - Submit to Congress a report that describes all alternatives under consideration
 - Await action by Congress



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GTCC LLW Inventory

- GTCC LLW
 - Commercial waste (non-DOE) including sealed sources, activated metals from nuclear utilities, and other waste
- “GTCC-like” DOE waste
 - Non-defense transuranic waste and waste without a confirmed path to disposal
- Total inventory estimate (5,600 m³)
 - Subject to change based on public comments and additional waste streams that may be identified



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Analyzing GTCC LLW Alternatives Environmental Impact Statement

- DOE issued a Notice of Intent on 7/ 23/2007 to formally initiate the EIS process
 - Identified proposed disposal alternatives for evaluation
 - Enhanced near surface disposal
 - Intermediate depth boreholed disposal
 - Geologic disposal at WIPP or Yucca Mountain
 - Considered DOE sites (Hanford, Idaho, Los Alamos, Nevada Test Site, Oak Ridge, Savannah River and WIPP vicinity) and generic commercial sites
- Completed Public Scoping Period on 9/21/2007
 - Conducted 9 public scoping meetings
 - Received approximately 250 comments on EIS scope



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GTCC LLW Disposition Path Forward

- Complete GTCC EIS
 - Issue Draft EIS - 2008
 - Issue Final EIS - 2009
- Issue Report to Congress on Disposal Alternatives – 2009
- Congressional action
- Issue Record of Decision

For more info: <http://www.gtcceis.anl.gov>



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Waste Information Management System (WIMS)

- Waste forecast provided by DOE sites annually
 - Data provided at a “hybrid stream” level
 - Next update in progress; expected March 2008
- Currently LLW and MLLW data in WIMS
- 2008 update will include number of shipments planned in FY 2008-2009 for EM waste streams
 - Plan to support semi-annual update of shipments
- WIMS built and maintained by Florida International University
- Publicly available at: <http://wims.arc.fiu.edu/wims>



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Waste Information Management System

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Waste from

Waste to

Display Forecast Data

Fiscal Year : From To Waste Type:

Waste forecast to be disposed from Oak Ridge Reservation to All Facilities
for All Materials Material(s) in m³ (Fiscal Year: 2006 --2008)

Row No	Reporting Site	Disposition Facility Name	Waste Stream Name	Field Stream ID	Managing Program	Classified Flag	Waste Type	Treatment	Physical Form
1	Oak Ridge	EMWMF Disposal Cell (ORR)	Debris_Classified_LLW	WGF-11	Environmental Management	Yes	Low Level Waste	None	Debris Waste
2	Oak Ridge	Area 5 LLW Disposal Unit (NTS)	Debris_Classified_LLW	WGF-12	Environmental Management	Yes	Low Level Waste	None	Debris Waste
3	Oak Ridge	To Be Determined	Liquid_LLW	WGF-13	Environmental Management	No	Low Level Waste	To Be Determined	Liquids
4	Oak Ridge	Commercial-3	Debris_LLW	WGF-1	Environmental Management	No	Low Level Waste	Multiple/Various	Debris Waste
5	Oak Ridge	Commercial-2	Debris_LLW	WGF-1.1	Environmental Management	No	Low Level Waste	None	Debris Waste
6	Oak Ridge	Commercial-6	Organic Liquid_LLW	WGF-15	Environmental Management	No	Low Level Waste	Multiple/Various	Organic Liquids
7	Oak Ridge	To Be Determined	Organic Liquid_LLW	WGF-16	Environmental Management	No	Low Level Waste	To Be Determined	Organic Liquids
8	Oak Ridge	EMWMF Disposal Cell (ORR)	Soil_LLW	WGF-18	Environmental Management	No	Low Level Waste	None	Soil/Gravel
9	Oak Ridge	Commercial-2	Soil_LLW	WGF-19	Environmental Management	No	Low Level Waste	None	Soil/Gravel

> Class A Commercial	StatusFlag	Successor Field StreamID	Actual Disposition 2005	Starting Inventory 2006	FY 2006	FY 2007	FY 2008	Total Waste	Row No	
No	<input checked="" type="checkbox"/>		1,008.00	0.00	15,992.00	4,041.00	1,741.00	21,774.00	1	Status/Comments
No	<input checked="" type="checkbox"/>		368.00	4.00	4,941.00	16,213.00	175.00	21,329.00	2	Status/Comments
Unknown	<input type="checkbox"/>		0.00	0.00	28.00	0.00	0.00	28.00	3	Status/Comments
No	<input checked="" type="checkbox"/>	WGF-1.1	11.00	0.00	17.00	0.00	0.00	17.00	4	Status/Comments
No	<input checked="" type="checkbox"/>		11.00	0.00	17.00	0.00	0.00	17.00	5	Status/Comments
Unknown	<input checked="" type="checkbox"/>		0.00	0.00	1.00	9.00	0.00	10.00	6	Status/Comments
Unknown	<input type="checkbox"/>		0.00	0.00	0.00	9.00	0.00	9.00	7	Status/Comments
No	<input checked="" type="checkbox"/>		27,148.00	0.00	36,138.00	79,390.00	25,157.00	140,685.00	8	Status/Comments
No	<input checked="" type="checkbox"/>		253.00	0.00	158.00	158.00	158.00	474.00	9	Status/Comments

Waste Information Management System

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Fiscal Year : From To Waste Type:

Site Name	FieldStreamID	Waste Type	Physical Form	Volume	> Class A	Status	Treatment	Disposition Facility
Hanford-RL	MLLW-01-M	Mixed Low Level Waste	Final Waste Forms	1315 m ³	Yes			RMW Trenches/IDF (HANF) 3269 m ³
Hanford-RL	MLLW-02-L	Mixed Low Level Waste	Lab Packs	100 m ³	Yes			
Hanford-RL	MLLW-03-L	Mixed Low Level Waste	Lab Packs	275 m ³	Yes			
Hanford-RL	MLLW-08-M	Mixed Low Level Waste	Special Waste	1 m ³	Yes			
Hanford-RL	MLLW-10-M	Mixed Low Level Waste	Specific Waste Forms	25 m ³	No			
Hanford-RL	MLLW-09-M	Mixed Low Level Waste	Specific Waste Forms	10 m ³	No			
Hanford-RL	MLLW-05-M	Mixed Low Level Waste	Specific Waste Forms	14 m ³	No			

Status Flag Color Key:

No Issues

Minor Issues

Significant Issues

Symbol indicates that this waste stream has a subsequent waste stream. Placing the cursor over the symbol indicates the stream ID.

Treatment Flags:

Placing the cursor over the symbol indicates the listed treatment disposition. See comments field on the Forecast Data Screen for detailed information

Waste Disposition GIS Map

U.S. Department of Energy, Office of Environmental Management



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Waste from

Waste to

Fiscal Year : From To

Waste Type:

Waste forecast to be disposed from All Sites to All Facilities
for All Materials Material(s) in numbers of shipments (Fiscal Year: 2007 --2037 To 2045)

Field Stream ID	Waste Type	Rail 2008	Truck 2008	Intermodal 2008	Rail 2009	Truck 2009	Intermodal 2009
8020-01	Low Level Waste	4	2	3	0	1	1
AEL106DOEa	Low Level Waste	3	1	2	0	2	2
AEL105DOEa	Low Level Waste	2	3	1	2	2	0
AEL107DOEa	Low Level Waste	1	0	4	1	3	2
AE-L104DOE	Low Level Waste	0	3	0	2	4	1
AEL107DOEb	Low Level Waste	2	4	2	0	0	2
AEL105DOEb	Low Level Waste	0	2	0	1	2	0
301 LLW	Low Level Waste	1	2	1	2	6	2

PROPOSED – NOT YET IMPLEMENTED IN WIMS